

CLAIMS

1. A vehicle-mounted man-machine interface device comprising:

5 means for displaying a screen;

press position detecting means for detecting a press position on the screen;

control means for displaying, on said display means, an operating screen on which a plurality of operating figures are arranged and for acquiring operation content specified by a press on the operating screen on the basis of arrangement positions of the operating figures, operations corresponding to the operating figures, and an output from said press position detecting means; and

traveling detecting means for detecting whether or not a vehicle having the vehicle-mounted man-machine interface device is traveling or for detecting a traveling speed of the vehicle,

20 wherein said control means has means for setting or altering one or both of the number of operating figures simultaneously displayed on the operating screen and sizes of the operating figures on the basis of an output from said traveling detecting means.

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2. The vehicle-mounted man-machine interface device according to claim 1, wherein as the operating screen, said control means displays an operating screen at the time of stopping on which a predetermined number of operating figures of

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predetermined sizes are arranged when the vehicle is not traveling and displays an operating screen at the time of traveling on which larger and fewer operating figures than the operating figures of the operating  
5 screen at the time of stopping are arranged when the vehicle is traveling.

3. The vehicle-mounted man-machine interface device according to claim 2, wherein said control  
10 means forms, as the operating screen at the time of traveling, a plurality of operating screens at the time of traveling with different combinations of operating figures arranged and switches among the operating screens at the time of traveling to display  
15 one of the operating screens.

4. The vehicle-mounted man-machine interface device according to claim 2 or 3, wherein the operating figures arranged on the operating screen at  
20 the time of traveling are some of the operating figures arranged on the operating screen at the time of stopping that are selected in consideration of a frequency of use of or need for each of the operating figures.

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5. The vehicle-mounted man-machine interface device according to claim 3 or 4, wherein if a position different from an arrangement position of any of the operating figures in the operating screen at  
30 the time of traveling being displayed is pressed, said

control means switches from the displayed screen to another operating screen at the time of traveling or an operating screen for selecting a function which is superior to the operating screens at the time of  
5 traveling.

6. The vehicle-mounted man-machine interface device according to any one of claims 2 to 5, wherein said control means has means for accepting setting or  
10 change of a size or an arrangement position of an operating figure to be arranged on each of the operating screens at the time of traveling or an operating figure arranged on each operating screen at the time of traveling.

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7. The vehicle-mounted man-machine interface device according to claim 6, wherein said control means displays, as the operating screen at the time of traveling, an operating screen in which a size or an  
20 arrangement position of an operating figure to be arranged or an operating figure arranged is set according to a history of the setting or change.

8. The vehicle-mounted man-machine interface  
25 according to any one of claims 2 to 7, wherein said control means displays, as the operating screen at the time of traveling, an operating screen in which an operating figure to be arranged is set according to a history of operation of each of the operating figures.

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9. The vehicle-mounted man-machine interface device according to claim 7 or 8, having means for exchanging the history with another device.

5           10. The vehicle-mounted man-machine interface device according to any one of claims 1 to 9, wherein said traveling detecting means detects whether or not the vehicle is traveling or detecting the traveling speed of the vehicle according to an output from a  
10 vehicle speed pulse generator, a vehicle speedometer, or means for detecting operation of a parking brake.

          11. The vehicle-mounted man-machine interface device according to any one of claims 1 to 10, wherein  
15 said control means displays information related to operation with each of the operating figures on the operating screen and at the same time, alters one or both of content and a size of the displayed information according to an output from said traveling  
20 detecting means.

          12. A program causing a computer to function as means constituting a vehicle-mounted man-machine interface device according to any one of claims 1 to  
25 11.

          13. A man-machine interface method performed by a vehicle-mounted device, the method comprising the steps of:  
30           displaying, on display means, an operating

screen on which a plurality of operating figures are arranged;

acquiring operation content specified by a press on the operating screen on the basis of arrangement  
5 positions of the operating figures, operations corresponding to the operating figures, and an output from press position detecting means for detecting a position of the press;

detecting whether or not a vehicle having the  
10 vehicle-mounted device is traveling or detecting a traveling speed of the vehicle; and

altering one or both of the number of operating figures simultaneously displayed on the operating screen and sizes of the operating figures on the basis  
15 of a detection result obtained in the traveling detecting step.